CLAIMS

1. A transparent substrate (6), particularly made of glass, comprising on at least one of its faces an antireflection coating, particularly at normal incidence made of a multilayer (A) of thin layers made of dielectrical material with alternatively high and low refractive indexes, characterized in that the multilayer comprises, in succession:

a high-index first layer (1), with a refractive index n_1 of between 1.8 and 2.2 and geometrical thickness e_1 of between 5 and 50 nm,

a low-index second layer (2), with a refractive index n_2 of between 1.35 and 1.65 and a geometrical thickness e_2 of between 5 and 50 nm,

a high-index third layer (3) with a refractive index n_3 of between 1.8 and 2.2 and a geometrical thickness e_3 of between 40 and 150 nm,

a low-index depth fourth layer (4) with a refractive index n_4 of between 1.35 and 1.65 and a geometrical thickness e_4 of between 40 and 120 nm,

this multilayer being designed on the one hand to guarantee the substrate a good esthetic appearance irrespective of the angle of incidence and, being able on the other hand to undergo heat treatment.

2. The substrate (6) as claimed in claim 1, characterized in that n_1 and/or n_3 are between 1.85 and 2.15, particularly between 1.90 and 2.10.

3. The substrate (6) as claimed in one of the preceding claims, characterized in that n_2 and/or n_4 are between 1.35 and 1.65.

4. The substrate (6) as claimed in one of the preceding claims, characterized in that e_1 is between 5 and 50 nm, particularly between 10 and 30 nm or between 15 and 25 nm.

5. The substrate (6) as claimed in one of the preceding claims, characterized in that e_2 is between 5 and 50 nm, particularly less than or equal to 35 nm or to 30 nm, particularly being between 10 and 35 nm.

6. The substrate (6) as claimed in one of the preceding claims, characterized in that e_3 is between 45 and 80 nm.

7. The substrate (6) as claimed in one of the preceding claim, characterized in that e_4 is between 45 and 110 nm and preferably between 70 and 100 nm.

8. A substrate (6) characterized in that the high-index first layer (1) and the low-index second layer (2) are replaced by an intermediate-index single layer (5)

e_5 of between 1.65 and 1.80 and preferably having an optical thickness $e_{.opt5}$ of between 50 and 140 nm, preferably between 85 and 120 nm.

9. The substrate (6) as claimed in claim 8, characterized in that the intermediate-index layer (5) is based on a mixture of, on the one had, silicon oxide and, on the other hand, at least one metal oxide chosen from tin oxide, zinc oxide, titanium oxide or is based on a silicon oxynitiride or oxycarbide and/or aluminum oxynitride.

10. The substrate (6) as claimed in one of the preceding claims, characterized in that the high-index first layer (1) and/or the high-index third layer (3) are based on metal oxide(s) chosen from zinc oxide, tin oxide, zirconium oxide or based on (a) nitride(s) chosen from silicon nitride and/or aluminum nitride or based on mixed tin/zinc oxides (SnxZnyOz) or mixed zinc-titanium oxides ($TiZnO_x$) or based on mixed silicon-titanium oxide (SixTiyOz).

11. The substrate (6) as claimed in one of the preceding claims, characterized in that the high-index first layer(1) and/or the high-index third layer (3) consist of a superposition of several high-index layers, particularly of a superposition of two layers such as SnO_2/Si_3N_4 or Si_3N_4/SnO_2.

12. The substrate (6) as claimed in one of the preceding claims, characterized in that the low-index second layer (2) and/or the low-index fourth layer (4) are based on silicon oxide, silicon oxynitride and/or oxycarbide or on a mixed oxide of silicon and of aluminum.

13. The substrate (6) as claimed in one of the preceding claims, characterized in that said substrate is made of clear or bulk-tinted glass.

14. The substrate as claimed in one of the preceding claims, characterized in that its light reflection on the side on which it is equipped with the multilayer made up of thin layers is lowered by a minimum amount of 3 or 4% at a normal angle of incidence.

15. The substrate as claimed in one of the preceding claims, characterized in that the colorimetry of its light reflection on the side on which it is equipped with the multilayer made up of thin layers is such that the corresponding b* value in the (L*, a*, b*) colorimetry system is negative, at a normal angle of incidence.

16. The substrate as claimed in one of the preceding claims, characterized in that the antireflection multilayer uses, at least for its high-index third layer, a mixed tin/zinc or silicon titanium oxide, a silicon nitride, so that it is able to undergo a heat

treatment of the curving, toughening, annealing type and so that it has enhanced mechanical and chemical durability.

17. The substrate as claimed in claim 16, characterized in that the antireflection multilayer uses, at least for its high-index third layer, a silicon nitiride so that it has very good mechanical durability such that ΔH in the TABER test is less than 3 %.

18. The substrate as claimed in claim 16, characterized in that the antireflection multilayer uses, at least for its high-index third layer, a mixed tin/zinc or silicon titanium oxide so that it is able to undergo significant heat treatment, particularly curving, bending, of great severity, it being possible for R to reach 10 cm.

19. The substrate (6) as claimed in any one of claims 1 to 18, characterized in that it is equipped on one of its faces with the anti-reflection multilayer and, on its other face, either with no antireflection multilayer or also with an antireflection multilayer, or with another type of antireflection coating, or with a coating having some other functionality of the solar protection, low emissivity, antifouling, antifogging, antirain or heating type.

20. The substrate as claimed in claim 19, characterized in that the other type of antireflection coating is chosen from the following coatings:

a single layer with a low index, lower than 1.60 or 1.50, particularly of about 1.35 - 1.48, particularly based on silicon oxide,

a single layer the refractive index of which varies through its thickness, particularly of the silicon oxynitride SiO_xN_y, type, with x and y varying through its thickness,

a two-layer multilayer comprising, in succession, a layer with a high index of at least 1.8, particularly tin oxide, zinc oxide, zirconium oxide, titanium oxide, silicon or aluminum nitride, followed by a layer with a low index, below 1.65, particularly made of silicon oxide, oxynitride or oxycarbide,

three-layer multilayer comprising, in succession, a layer of medium index of between 1.65 and 1.8 of the silicon and/or aluminum oxycarbide or oxynitride type, a layer with a high index above 1.9 of the SnO_2, TiO_2 type, a layer with a low index less than 1.65 of the mixed Si-Al oxide or silicon oxide type.

antifouling coating.

21. A multiple glazed unit, particularly a double glazed unit, or unit with a laminated structure, comprising at least two substrates as claimed in any one of claims 1 to 20, characterized in that the two glass substrates (6, 6') are combined

using a sheet (7) of thermoplastic, the substrate (6) being equipped, on the opposite side to the assembly, with the antireflection multilayer and the substrate (6') being equipped, on the opposite side to the assembly, with either no antireflection coating or also an antireflection coating, or with another type of antireflection coating, or with a coating having another functionality of the solar protection, low emissivity, antifouling, antifogging, antirain or heating type, it also being possible for said coating with another functionality to be located on one of the faces of the substrates that face toward the thermoplastic sheet used for assembly.

22. A method for obtaining the glazing as claimed in claim 21, characterized in that the antireflection multilayer or multilayers is or are deposited by cathode sputtering and any antireflection coating there might be is deposited using a sol-gel, a pyrolysis technique of the CVD, or plasma CVD type, by cathode sputtering or by corona discharge.

23. An application of the glazing as claimed in claim 21 as interior or exterior glazing for buildings, as display cabinets, as counters in stores, that may be curved, as anti-dazzle computer screens, and as glass furniture.